

Notice of Allowability

Application No.

10/822,118

Applicant(s)

SANDHU ET AL.

Examiner

DAVID VU

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 04/08/04.
2. ☒ The allowed claim(s) is/are 1-114.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 04/06/05; 12/27/04; 11/09/04; 10/25/04;
- ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
- ☐ Examiner's Amendment/Comment
- ☒ Examiner's Statement of Reasons for Allowance
- ☐ Other _____

08/27/04
04/08/04

David Vu
Primary Examiner
AU 2818

DETAILED ACTION

Allowable Subject Matter

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Pat. 6,838,363 – discloses a method of forming a metal silicide comprises the provision of a substrate having formed thereon a silicon region with a surface area for receiving the metal silicide.

2. Claims 1-114 are allowed.

3. The following is an examiner's statement of reason for allowance:

With regard to method claims 1-50, the prior art of record, either singularly or in combination, does not disclose or suggest a method of forming a reaction product, comprising: providing the interface at a processing temperature which is at least 50°C below the minimum reaction temperature and at the pressure; and with the interface at the processing temperature and at the pressure, exposing the substrate to a plasma effective to impart a reaction of the first material with the second material to form a reaction product third material of the first and second materials over the first material, as instantly claimed and in combination with the additionally claimed method steps.

With regard to method claims 51-89, the prior art of record, either singularly or in combination, does not disclose or suggest a method of forming a reaction product, comprising:

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providing the interface at a processing temperature which is at least 50°C below the minimum reaction temperature and at the pressure; and with the interface at the processing temperature and at the pressure, exposing the substrate to a plasma effective to impart a reaction of the first material with the second material to form a reaction product third material of the first and second materials over the first material, the plasma being inert to reaction with both the first and second materials and inert to deposition of material over the second material., as instantly claimed and in combination with the additionally claimed method steps.

With regard to method claims 90-114, the prior art of record, either singularly or in combination, does not disclose or suggest a method of forming a conductive metal silicide by reaction of metal with silicon, comprising: providing the interface at a processing temperature which is at least 50°C. below the minimum reaction temperature and at the pressure; and with the interface at the processing temperature and at the pressure, exposing the substrate to a plasma effective to impart a reaction of the first material with the second material to form a metal silicide on the first material, the plasma being inert to reaction with both the silicon and the at least one of the elemental metal and the metal compound and inert to deposition of material over the second material, as instantly claimed and in combination with the additionally claimed method steps.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Vu whose telephone number is 571-272-1798. The examiner can normally be reached on Monday-Friday 8:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR, Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David Vu

Primary Examiner